

Application No.: 10/583,351
Attorney Docket No.: 062677
Amendment under 37 CFR §1.111

AMENDMENTS TO THE CLAIMS

The listing of claims below replaces all prior versions of claims in the application.

1. (Currently Amended): A process for preparing a vinyl chloride copolymer resin by copolymerizing a vinyl chloride type monomer and a macromonomer having a polymer comprising an ethylenically unsaturated monomer containing a double bond in a main chain, wherein the vinyl chloride type monomer and the macromonomer having a polymer comprising an ethylenically unsaturated monomer containing a double bond in a main chain are previously dispersed and mixed at a temperature from 20°C to 60°C for at least 1 minute so as to obtain a mixture solution, and [[then]] copolymerization reaction of the mixture solution [[thereof]] is carried out initiated.

2. (Original): The process for preparing a vinyl chloride copolymer resin of Claim 1, wherein the vinyl chloride type monomer and the macromonomer having a polymer comprising an ethylenically unsaturated monomer containing a double bond in a main chain are totally put into a dispersing-and-mixing tank, and then dispersed and mixed.

3. (Currently Amended): The process for preparing a vinyl chloride copolymer resin of Claim 1 [[or 2]], wherein the ratio of the vinyl chloride type monomer to the total amount of the monomer components constituting the vinyl chloride copolymer resin is at least 50 % by weight up to less than 100 % by weight.

4. (Currently Amended): The process for preparing a vinyl chloride copolymer resin of Claim 1 [[or 2]], wherein the ratio of (A) the vinyl chloride type monomer to (B) the macromonomer having a polymer comprising an ethylenically unsaturated monomer containing a double bond in a main chain (A/B) is 99.95 % by weight/0.05 % by weight to 60 % by weight/40 % by weight.

5. (Currently Amended): The process for preparing a vinyl chloride copolymer resin of Claim 1 [[or 2]], wherein the vinyl chloride type monomer and the macromonomer having a polymer comprising an ethylenically unsaturated monomer containing a double bond in a main chain are copolymerized in an aqueous medium.

6. (Currently Amended): The process for preparing a vinyl chloride copolymer resin of Claim 1 [[or 2]], wherein the vinyl chloride type monomer and the macromonomer having a polymer comprising an ethylenically unsaturated monomer containing a double bond in a main chain are prepared by at least one process selected from the group consisting of emulsion polymerization, suspension polymerization and micro suspension polymerization.

7. (Currently Amended): The process for preparing a vinyl chloride copolymer resin of Claim 1 [[or 2]], wherein the macromonomer having a polymer comprising an ethylenically unsaturated monomer containing a double bond in a main chain has a polymerizable reactive group, and said polymerizable reactive group has a structure containing at least one group represented by the following general formula per one molecule:



wherein R represents a hydrogen atom or an organic group having 1 to 20 carbon atoms.

8. (Currently Amended): The process for preparing a vinyl chloride copolymer resin of Claim 1 [[or 2]], wherein the macromonomer having a polymer comprising an ethylenically unsaturated monomer containing a double bond in a main chain is prepared by living radical polymerization.

9. (Currently Amended): The process for preparing a vinyl chloride copolymer resin of Claim 1 [[or 2]], wherein at least one of the macromonomers having a polymer comprising an ethylenically unsaturated monomer containing a double bond in a main chain has a glass transition temperature of at most 0°C.

10. (Currently Amended): A vinyl chloride copolymer resin ~~composition which contains the vinyl chloride copolymer resin obtained by the process of Claim 1 or 2~~ obtained by copolymerizing a vinyl chloride type monomer and a macromonomer having a polymer comprising an ethylenically unsaturated monomer containing a double bond in a main chain, wherein the macromonomer has a number average molecular weight ranging from 500 to 100,000 and a ratio of weight average molecular weight (Mw) to number average molecular weight (Mn) (Mw/Mn) of smaller than 1.8.

11. (New): The vinyl chloride copolymer resin of Claim 10, wherein the ratio of the vinyl chloride type monomer to the total amount of the monomer components constituting the vinyl chloride copolymer resin is at least 50 % by weight up to less than 100 % by weight.

12. (New): The vinyl chloride copolymer resin of Claim 10, wherein the ratio of (A) the vinyl chloride type monomer to (B) the macromonomer having a polymer comprising an ethylenically unsaturated monomer containing a double bond in a main chain (A/B) is 99.95 % by weight/0.05 % by weight to 60 % by weight/40 % by weight.

13. (New): The vinyl chloride copolymer resin of Claim 10, wherein the vinyl chloride type monomer and the macromonomer having a polymer comprising an ethylenically unsaturated monomer containing a double bond in a main chain are copolymerized in an aqueous medium.

14. (New): The vinyl chloride copolymer resin of Claim 10, wherein the vinyl chloride type monomer and the macromonomer having a polymer comprising an ethylenically unsaturated monomer containing a double bond in a main chain are prepared by at least one process selected from the group consisting of emulsion polymerization, suspension polymerization and micro suspension polymerization.

15. (New): The vinyl chloride copolymer resin of Claim 10, wherein the macromonomer having a polymer comprising an ethylenically unsaturated monomer containing a double bond in

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a main chain has a polymerizable reactive group, and said polymerizable reactive group has a structure containing at least one group represented by the following general formula per one molecule:



wherein R represents a hydrogen atom or an organic group having 1 to 20 carbon atoms.

16. (New): The vinyl chloride copolymer resin of Claim 10, wherein the macromonomer having a polymer comprising an ethylenically unsaturated monomer containing a double bond in a main chain is prepared by living radical polymerization.

17. (New): The vinyl chloride copolymer resin of Claim 10, wherein at least one of the macromonomers having a polymer comprising an ethylenically unsaturated monomer containing a double bond in a main chain has a glass transition temperature of at most 0°C.

18. (New): The process for preparing a vinyl chloride copolymer resin of Claim 1, wherein the macromonomer has a number average molecular weight ranging from 500 to 100,000.

19. (New): The process for preparing a vinyl chloride copolymer resin of Claim 1, wherein the macromonomer has a ratio of weight average molecular weight (Mw) to number average molecular weight (Mn) (Mw/Mn) of small than 1.8.